



# EPA

# South Indian Bend Wash Superfund Site

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION 9 • FEBRUARY 2002

## EPA Issues Decision for Seven Subsites

On January 8, 2002, the U.S. Environmental Protection Agency (EPA), with concurrence from the Arizona Department of Environmental Quality and the Arizona Department of Water Resources, signed a decision document regarding cleanup for seven subsites at the South Indian Bend Wash Superfund site (SIBW). This decision document, known as a "Plug-In Determination," is related to the *Record of Decision for VOCs in the Vadose Zone* (1993 ROD) that was signed by EPA on September 27, 1993. ("VOCs" are volatile organic compounds, and "vadose zone" means soils). In the 1993 ROD, EPA was tasked with further investigating several subsites of the larger SIBW area to determine if soil cleanup was necessary. The subsites addressed in the Plug-In Determination and this fact sheet are: Eldon, Circuit Express, Allstate Mine Supply, Desert Sportswear, Cerprobe, Service and Sales, and City of Tempe Right-of-Way. The Plug-In Determination documents that soil cleanup at these subsites is not necessary.

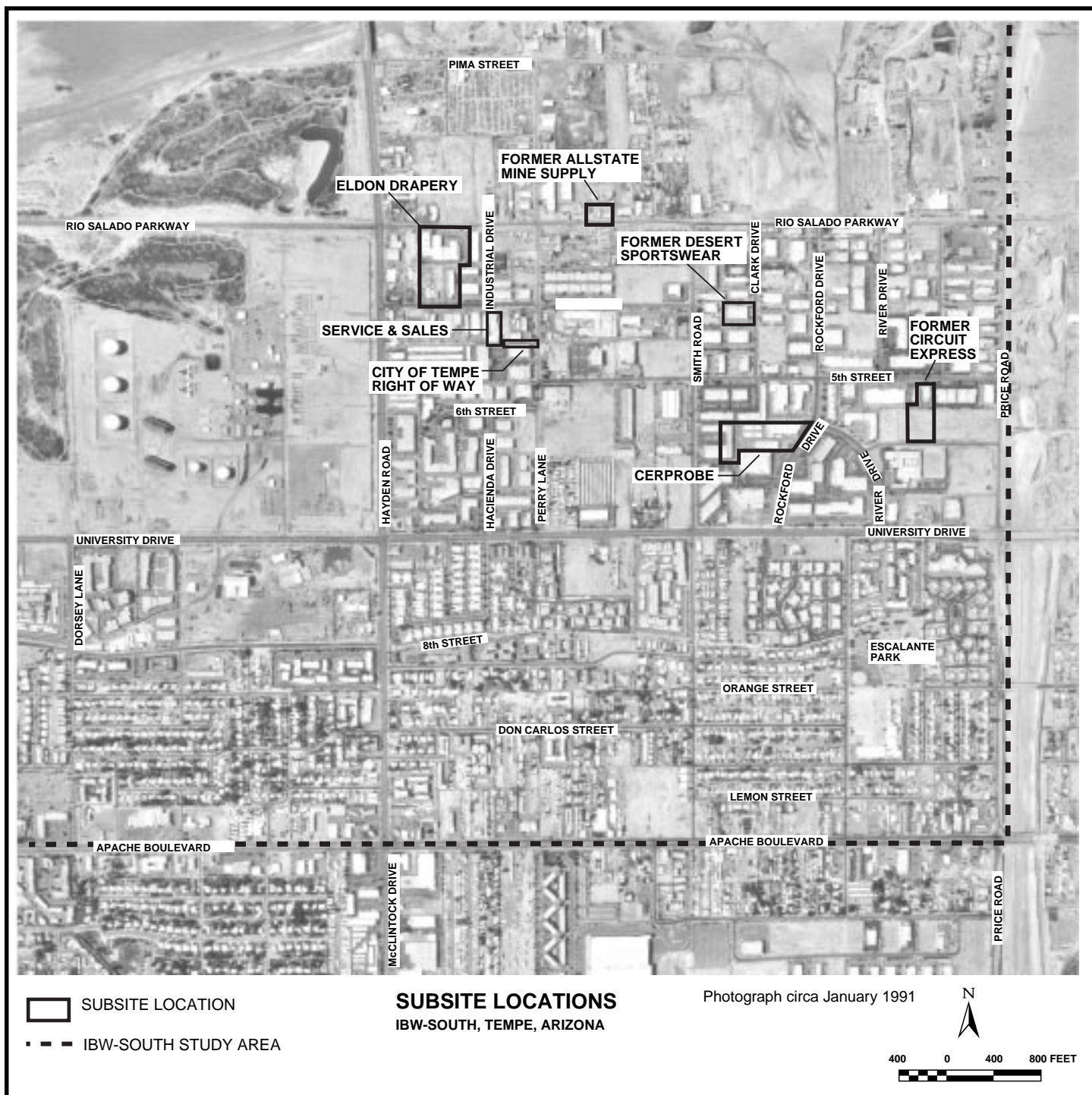
### BACKGROUND

The Indian Bend Wash site includes two study areas — North Indian Bend Wash (NIBW) and South Indian Bend Wash (SIBW). The approximate boundaries of the SIBW study area are: the Salt River to the north; Apache Blvd to the south; Price Road to the east; and Rural Road to the west. This area is approximately three square miles in size. This fact sheet focuses on SIBW only. More information on NIBW can be obtained at the repository located at the Scottsdale Civic Center Library, 3839 Drinkwater Boulevard, Scottsdale, Arizona.

VOCs have been found in soil at SIBW. These compounds are a class of organic solvents such as trichloroethylene (TCE) and perchloroethylene (PCE). They are commonly used in dry cleaning and manufacturing to degrease parts. Some VOCs are believed to increase the risk of cancer and cause other adverse health effects to people who are exposed to them over long periods of time.

SIBW contains a number of separate industrial and business properties. Up until the 1970s, before our current environmental regulations existed, industrial solvents containing VOCs were typically disposed of directly onto the ground or in dry wells. These disposal practices resulted in VOC contamination in soils at SIBW. VOCs can move downward through soils and reach groundwater. In order to protect people potentially exposed to the soils and to protect the groundwater, EPA issued the 1993 ROD (following public comment) to address soils contaminated with VOCs at SIBW.

The Plug-In Determination document is a requirement of the 1993 ROD. As indicated above, the 1993 ROD specifically addresses VOCs in soils. Therefore, the Plug-In Determination is focused on VOCs in the soils and does not address other contaminants that may be present at these subsites.



*Subsite locations at South Indian Bend Wash Superfund site*

## THE PLUG-IN APPROACH

There are many facilities, known as subsites, at separate locations within SIBW. These subsites have the same VOC contamination in very similar types of soils. The SIBW subsites addressed in this fact sheet are: Eldon, Circuit Express, Allstate Mine Supply, Desert Sportswear, Cerprobe, Service and Sales, and City of Tempe Right-of-Way. The locations of these subsites are shown on the aerial photograph on page 2.

Traditionally, EPA investigates and then evaluates cleanup alternatives for each facility or subsite. However, due to the similarities among the SIBW subsites, it was likely that the same cleanup would have been proposed in each case. Rather than select the same remedy repeatedly for many facilities,

EPA selected a remedy in the 1993 ROD that used the “Plug-In Approach” in order to save time and resources.

Using the Plug-In Approach, EPA selected a cleanup that would apply whenever a certain set of conditions existed. This set of conditions was defined in the 1993 ROD. First, investigations are required to be conducted at each subsite. These investigations are known as “Focused Remedial Investigations” or FRIs. After the FRIs have been conducted at each facility, EPA compares the results of the FRI with the standard criteria (See box: Plug-In Criteria). If the facility meets the specified conditions, then a cleanup will be required at that facility.

*(Continued on next page)*

### PLUG-IN CRITERIA

The Plug-In Criteria for the 1993 ROD remedy are listed below. Implementation of SVE would have been required at the seven subsites evaluated in the recent Plug-In Determination if the VOCs present in the soils at the subsites would have met any of the following five criteria:

1. Present a cancer risk of more than one in one million to a person over a lifetime from both ingestion of VOCs in groundwater and inhalation of VOCs during other household uses of groundwater, such as showering;
2. Present a cancer risk of more than one in one million to a person over a lifetime from inhalation of air above the soils at the subsite itself;
3. Present an unacceptable risk (by Agency standards) for non-cancer effects to a person over a lifetime from both ingestion of VOCs in groundwater and inhalation of VOCs during household uses of groundwater;
4. Present an unacceptable risk (by Agency standards) for non-cancer effects to a person over a lifetime from inhalation of air above the soils at the subsite itself; or
5. Cause VOCs in groundwater to be greater than the federal Maximum Contaminant Levels (MCLs) allowed under the Safe Drinking Water Act.

## GROUNDWATER

The Plug-In Determination discussed in this fact sheet does not address groundwater issues at SIBW. However, the following is a brief summary of the history and cleanup work associated with groundwater at SIBW.

In 1981, VOCs were found in groundwater production wells in the Tempe and Scottsdale areas. As a result, local water providers stopped using those wells for drinking water. Both SIBW and NIBW were listed on the National Priorities List (or Superfund list) in 1983. Since that time, VOCs have been found in various groundwater monitoring wells and in soils within the SIBW study area.

On September 30, 1998, following public comment, EPA issued the *Record of Decision for VOCs in Groundwater* (1998 ROD). The 1998 ROD addresses three separate groundwater plumes: the western plume, the central plume and the eastern plume. The remedy selected for the western plume was extraction and treatment and the remedy for the central and eastern plumes is monitored natural attenuation. Monitored natural attenuation means that EPA monitors the natural biological degradation of contaminants over time.

EPA is in the process of doing additional investigation in the western plume, and Remedial Design for monitored natural attenuation in the central and eastern plumes is currently underway. Remedial Design determines what contaminants we will look for, where the monitoring will take place (location of monitoring wells) and how often samples will be taken.

The 1993 ROD selected soil vapor extraction (SVE) as the cleanup technology at SIBW. Because VOCs are volatile, they readily evaporate to become vapor. SVE removes VOCs from the ground using a vacuum to suck the air in the soil to the ground surface. The extracted contaminated air is then treated using carbon filtration. SVE is well suited to the Plug-In Approach because it is versatile and relatively unaffected by differences in physical conditions that might exist between one facility and the next.

After each facility has been investigated and EPA has made a decision regarding whether or not a particular subsite meets the criteria, the 1993

ROD specifies that EPA will issue a "Plug-In Determination Document" and make the FRI Report available for the public to review.

## EPA DETERMINATION FOR SEVEN SUBSITES

EPA has conducted the FRIs and performed the plug-in evaluation for the seven subsites discussed in this fact sheet. The FRIs for each of these sites and EPA's Plug-In Determination can be reviewed in the SIBW information repository (see page 5).

The results of the Plug-In evaluations can be found in Section 8 of the FRI Reports. Based on these analyses, EPA has determined that VOCs in the

vadose zone, or soils, do not exceed any of the Plug-In Criteria for any of the seven subsites. Therefore, SVE will not be required at these subsites. A summary of EPA's analyses is also included in Section 8 of each of the FRI Reports.

EPA has determined that although the physical conditions at the subsites fall within the remedy profile defined in the 1993 ROD, the subsites contain VOCs in soils at concentrations that do not exceed the Plug-In Criteria. Accordingly, EPA signed the Plug-In Determination on January 8, 2002 which documents that soil vapor extraction is not required for the seven subsites at the South Indian Bend Wash Superfund site.

## FOR MORE INFORMATION

If you have questions or concerns regarding any activities at the South Indian Bend Wash Superfund site, please contact the following staff members at either EPA or ADEQ:

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**Vicki Rosen**

Community Involvement Coordinator (SFD-3)  
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U.S. Environmental Protection Agency  
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San Francisco, CA 94105

**You may reach Melissa or Vicki toll-free at (800) 231-3075. Please leave a message and your call will be returned.**

ADEQ contact:

**Tina Wesoloskie**

Community Involvement Coordinator

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## INFORMATION REPOSITORY

The Administrative Record is made up of all documents upon which EPA relies in making site cleanup decisions. The Administrative Record for the SIBW Superfund site and other related site documents are located at:

Tempe Public Library  
3500 Rural Road  
Tempe, AZ 85282  
(480) 350-5511  
Mon - Thurs, 9 am - 9 pm  
Fri & Sat, 9 am - 5 pm  
Sunday, 12 pm - 5 pm



### Mailing List Coupon

If you are not already on our mailing list and would like to get future information on the South Indian Bend Wash site, please return this coupon to: Vicki Rosen, Community Involvement Coordinator, U.S. EPA, 75 Hawthorne St. (SFD-3), San Francisco, CA 94105.

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